

PLEASE AMEND THE CLAIMS AS FOLLOWS:

1. (PRESENTLY AMENDED) A purified and isolated polynucleotide ~~selected from the group consisting of:~~

~~\_\_\_\_\_ (a) \_\_\_\_\_ a polynucleotide encoding a polypeptide having the amino acid sequence of SEQ ID NO: 2, and~~

~~\_\_\_\_\_ (b) \_\_\_\_\_ a polynucleotide which is complementary to the polynucleotide of (a).~~

2. (PREVIOUSLY CANCELED) The polynucleotide of claim 1 wherein the polynucleotide comprises nucleotides selected from the group consisting of natural, non-natural and modified nucleotides.

3. (PREVIOUSLY CANCELED) The polynucleotide of claim 1 wherein the internucleotide linkages are selected from the group consisting of natural and non-natural linkages.

4. (PRESENTLY AMENDED) The polynucleotide of claim 1 wherein the polynucleotide encoding the polypeptide of SEQ ID NO:2 is a DNA polynucleotide comprising the ~~nucleotide polynucleotide~~ sequence of SEQ ID NO: 1.

5. (PRESENTLY AMENDED) A purified and isolated polynucleotide that is an expression vector comprising ~~[[a]]~~ the polynucleotide of claim 1.

6. (PREVIOUSLY AMENDED) A purified and isolated host cell comprising the expression vector of claim 5.

7. (PRESENTLY AMENDED) A process for expressing a MurC ~~protein~~ polypeptide of *Pseudomonas aeruginosa* in a recombinant host cell, comprising:

(a) transforming a suitable host cell with ~~[[an]]~~ the expression vector of claim 5;  
and, (b) culturing the host cell of step (a) in and under conditions ~~under~~ which allow expression of said the MurC ~~protein~~ polypeptide from said expression vector.

8. (PRESENTLY AMENDED) A purified and isolated polypeptide having the amino acid sequence of SEQ ID NO: 2.

9. (PRESENTLY AMENDED) A method of determining whether a candidate compound is an inhibitor of a *Pseudomonas aeruginosa* MurC polypeptide comprising:

- (a) providing at least one host cell harboring an expression vector that includes a polynucleotide encoding a polypeptide having the amino acid sequence of SEQ ID NO: 2 and
- (b) contacting ~~at least one of~~ said at least one cell[[s]] with the candidate to permit the interaction of the candidate with the MurC polypeptide, and
- (c) determining whether the candidate is an inhibitor of the MurC polypeptide by ascertaining the ~~relative~~ activity of the polypeptide in the presence of the candidate.

10. (PRESENTLY AMENDED) The method of claim 9 wherein the polynucleotide encoding a polypeptide having the amino acid sequence of SEQ ID NO: 2 has the ~~nucleotide~~ polynucleotide sequence of SEQ ID NO: 1.

11. (PRESENTLY AMENDED) The method of claim 9 wherein the determination of activity in step (c) ~~the relative activity is determined by~~ comprises comparing a measurement of MurC polypeptide activity of said at least one cell before step (b) to a measurement of MurC polypeptide activity of said at least one cell after step (b).

12. (PREVIOUSLY CANCELLED) A compound that is an inhibitor of a polypeptide having an amino acid sequence selected from the group consisting of

- (a) a polypeptide having an amino acid sequence of SEQ ID NO:2,
- (b) a polypeptide that is a naturally occurring mutant or polymorphic form of (a).

13. (PREVIOUSLY CANCELLED) A pharmaceutical composition comprising a pharmaceutically acceptable carrier and an inhibitor of a polypeptide having an amino acid sequence selected from the group consisting of

- (a) a polypeptide having an amino acid sequence of SEQ ID NO:2,
- (b) a polypeptide that is a naturally occurring mutant or polymorphic form of (a).

14. (PREVIOUSLY CANCELLED) A method of treatment of a patient in need of prophylactic or therapeutic treatment for a bacterial infection comprising administering to the

patient an effective amount of an inhibitor of a polypeptide having an amino acid sequence selected from the group consisting of

- (a) a polypeptide having an amino acid sequence of SEQ ID NO:2,
- (b) a polypeptide representing a naturally occurring mutant or polymorphic form of (a).

15. (PRESENTLY AMENDED) A method of determining whether a candidate compound is an inhibitor of a *Pseudomonas aeruginosa* MurC polypeptide comprising:

- (a) providing a sample that includes a MurC polypeptide having the amino acid sequence of SEQ ID NO: 2, and
- (b) contacting said sample with the candidate to permit the interaction of the candidate with the MurC polypeptide, and
- (c) determining whether the candidate is an inhibitor of the MurC polypeptide by ascertaining the ~~relative~~ activity of the MurC polypeptide in the presence of the candidate.

16. (PREVIOUSLY CANCELED) The method of claim 15 wherein the polypeptide has the amino acid sequence of SEQ ID NO:2.

17. (PREVIOUSLY PRESENTED) The method of claim 15 wherein in step (c) the relative activity is determined by comparing a measurement of MurC polypeptide activity of the sample before step (b) to a measurement of MurC polypeptide activity of the sample after step (b).